

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested. Currently, claims 51-84 and 86-88 are pending in this application.

Rejection Under 35 U.S.C. §112:

Claims 54, 55, 63, 65, 67-69, 73, 75-77, 85 and 86 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Applicant submits that the limitations recited in each of these claims have a proper antecedent basis. Applicant thus respectfully requests that the rejection of these claims under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejection Under 35 U.S.C. §103:

Claims 51-88 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Sistanizadeh et al (U.S. '548, "Sistanizadeh") in view of Ginzboorg et al (U.S. '091, hereinafter "Ginzboorg") and further in view of Itakura et al (U.S. '745, hereinafter "Itakura"). Applicant respectfully traverses this rejection.

In order to establish a *prima facie* case of obviousness, all of the claim limitations must be taught or suggested by the prior art. The combination of Sistanizadeh, Ginzboorg and Itakura fails to teach or suggest all of the claim limitations. For example, the combination fails to teach or suggest monitoring changes in the state of a logical connection, the logical connection being an internet socket defined by an IP address and a transport protocol port number, creating and recording data whenever the monitored logical connection changes state, and generating charging data on the basis of the recorded data, as required by independent claim 51 and its dependents. Similar, but not necessarily identical, comments apply to independent claims 70, 78, 82, 84 and 88. Similarly, the combination fails to teach or suggest determining a record of a number of all socket connections established and terminated as required by independent claim

54, a monitored logical connection comprising at least one socket connection, as required by claim 59 and monitoring changes in the state of a logical connection which is selected from a group consisting of: a Transmission Control Protocol socket connection, a User Datagram Protocol socket connection and an Internet Protocol socket connection, as required by independent claim 67.

Support for the internet socket is provided on, for example, page 11, line 1 to page 12, line 7 of the originally-filed specification. In particular, page 11, line 23 to page 12, line 7 describes a port number. As appreciated by those skilled in the art, an internet socket is composed of an IP address and a transport protocol port number. Further discussion of internet sockets is provided in Fig. 3 and corresponding description on page 15, line 14 to page 17, line 7 of the originally-filed specification.

In contrast to generating charging data based on monitored changes in state of a logical connection being an internet socket defined by an IP address and a transport protocol port number, Sistanizadeh discloses billing based on the duration for which a temporarily-assigned IP address is held by a customer. In particular, col. 11, lines 18-26 of Sistanizadeh discloses the following:

“In serving this purpose the DHCP server is provided with an intelligent or relational database. The improved DHCP also incorporates a billing capability. Thus the DHCP server has incorporated therein a protocol or clocking mechanism whereby the assigning of an IP address starts the clock for charging the customer. When the IP address is released tolling of the charge ceases with a time based stamping attributed to the IP assignment.”

Accordingly, Sistanizadeh discloses start/cease times defining a duration in which an IP address is held by a customer to generate charging information. As a general rule, an IP address will last much longer than an internet socket will last. Also, while a single internet address is

being used, multiple socket connections may have been made and broken, and multiple sockets may have existed in parallel (i.e., existed concurrently). The invention required by the above-noted claims provides a billing mechanism which is achieved by using socket information defined by an IP address and port number, and monitoring the existence of the sockets and change in their state.

The DHCP server disclosed by Sistanizadeh controls, allocates and recovers IP addresses in order to run its billing process. However, the DHCP server does not control port numbers to be used by the allocated IP addresses. Sistanizadeh's DHCP server also has no mechanism for monitoring changes in IP sockets since it can only detect the loan and return of IP addresses. There is no discussion, for example, of port numbers of the socket information with respect to billing.

Even if the teachings of Sistanizadeh, Ginzboorg and Itakura were combined, the combination would therefore not have taught or suggested monitoring an IP socket defined by an IP address and a port number. Again, the DHCP server disclosed by Sistanizadeh merely tracks the allocation and return of IP addresses. While Sistanizadeh discloses other billing options such as a fixed monthly charge for services in col. 16, line 62 to col. 17, line 25, these additional billing options fail to disclose monitoring socket information as claimed. Neither Ginzboorg nor Itakura resolves the above-described deficiencies of Sistanizadeh. For example, Ginzboorg merely discloses a charging scheme based on the amount of time for which an individual uses a terminal in conjunction with a smart card. (See col. 5, line 46 to col. 6, line 24). Ginzboorg, if anything, thus teaches away from the claimed invention. None of the cited references appreciate the advantages resulting from billing for actual usage of network resources based on socket information defined by IP addresses and the identities of ports used.

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Independent claim 68 requires, *inter alia*, “wherein the recorded data comprises a record of information extracted from at least one header associated with information passing between the computer system arranged to provide content to the user and the computer system operated by the user during a subsistence of the plurality of logical connections.” Independent claim 76 requires a similar feature. Independent claim 86 requires, *inter alia*, “wherein the measuring comprises measuring a plurality of durations each relating to a respective one of a plurality of the logical connections, the logical connections being at least partially contemporaneous and relating to a same client/server relationship.” Applicant respectfully submits that the combination of Sistanizadeh, Ginzboorg and Itakura fails to teach or suggest these limitations.

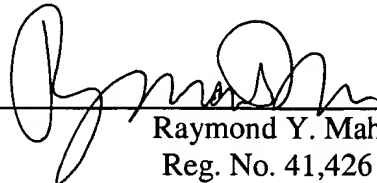
Applicant therefore respectfully requests that the rejection under 35 U.S.C. §103 be withdrawn.

Conclusion:

Accordingly, this entire application is now believed to be allowable condition and a formal Notice to that effect is respectfully solicited.

Respectfully submitted,

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